

CANADA
DEPARTMENT OF MINES AND RESOURCES

NATIONAL MUSEUM OF CANADA

BULLETIN No. 95

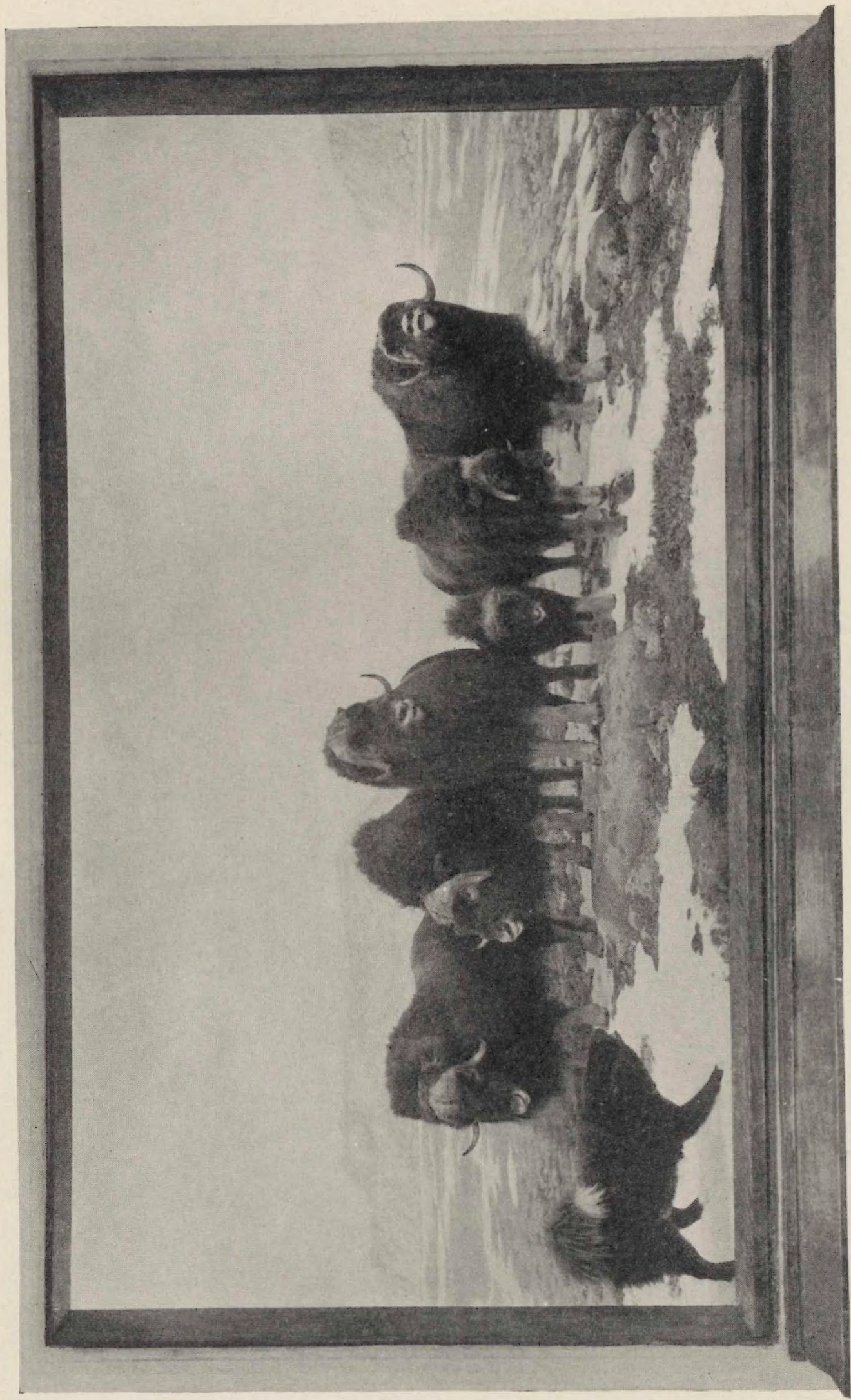
Annual Report of the National Museum
for the Fiscal Year 1938-39

CONTENTS

	PAGE
GENERAL ACTIVITIES	1
ANTHROPOLOGICAL DIVISION	5
BIOLOGICAL DIVISION	12
ORNITHOLOGICAL DIVISION	20



Price, 10 cents



Habitat group of musk-oxen.

CANADA
DEPARTMENT OF MINES AND RESOURCES

NATIONAL MUSEUM OF CANADA

BULLETIN No. 95

Annual Report of the National Museum
for the Fiscal Year 1938-39

CONTENTS

	PAGE
GENERAL ACTIVITIES	1
ANTHROPOLOGICAL DIVISION	5
BIOLOGICAL DIVISION	12
ORNITHOLOGICAL DIVISION	20



Price, 10 cents

GENERAL ACTIVITIES OF THE NATIONAL MUSEUM OF CANADA

By Wyatt Malcolm, Assistant Curator

During the summer of 1938 field investigations were conducted as follows: the biological survey of the Pacific Coast was continued northward and collections were made in the vicinity of Bella Coola; biological investigations were made in the national parks of the Rocky Mountains; ornithological studies were made in the vicinity of Dauphin, Manitoba; a botanical survey was made of the Michipicoten area, Ontario, to fill the gap between Batchawana and Schreiber, where surveys were made in 1935 and 1937, respectively; and archæological excavations were made in the vicinity of Waubaushene, Ontario. Important observations were made and recorded and valuable specimens were added to the Museum collections.

The second of a series of three habitat groups on the south side of the Hall of Biology has been finished. It is a group of six musk-oxen from Wager Bay in a setting geologically, topographically, and botanically characteristic of the Precambrian country of the Northwest Territories. Rocks and plants merge imperceptibly in a painted background correct in every detail.

The booth for the third of the series has just been constructed, and work will be started immediately by the members of our staff who set up the musk-ox group to prepare a beaver habitat group. Animals and accessories have been procured.

An exhibit that is now attracting much attention is a relief map of Canada, on a scale of 24 miles to 1 inch, recently set up in the rotunda of the Museum. It is 5½ feet high, has a radius of 11 feet, and is constructed on the spherical surface in exact proportion to the actual curvature of the earth. The relief is exaggerated fifteen times, an exaggeration sufficient to show the major physical features of the areas of low relief but not to over-accentuate those of the mountainous areas. Although the map is of interest chiefly to students of geography and physiography, it offers a new interpretation of Canada to the general observer who is accustomed to the flat map only. It was built under the control of the Topographical Survey of the Bureau of Geology and Topography, and it was designed and supervised by D. A. Nichols of the Topographical Survey.

The Geological Survey has placed on display in the tower room a well selected, well arranged, and well labelled collection of minerals illustrating the way in which minerals occur in nature, their physical properties, and their uses, and the ways in which they can be distinguished from one another. The excellent natural lighting of this room brings out well the brilliant colouring of minerals and the variety of their crystal forms.



Relief map of Canada.

The reorganization of the Hall of Anthropology was continued.

The Museum officials are sincerely appreciative of the generous assistance rendered by the Royal Canadian Mounted Police, and of the sympathetic co-operation of the National Parks Bureau. They wish also to thank most cordially those who by voluntary contribution of their time and talent made a success of the two lecture courses, the Boy Scouts Association for assistance at the Saturday morning lectures, and all persons and institutions who made contributions and co-operated in scientific investigations.

EDUCATIONAL WORK

Educational work is one of the most important activities of the National Museum, and each year greater demands are made upon the Museum staff.

VISITORS AND SCHOOL VISITS

The various exhibits were seen by 90,000 people during the year. This is exclusive of thousands of junior and senior pupils who, accompanied by their teachers, came in organized groups. Among these were senior and adult groups from Smith's Falls, Cornwall, North Bay, Ste. Anne de Bellevue, St. Lambert, Lexington, Ky., U.S.A., and Canton, N.Y., U.S.A.

Possibly the greatest recent development in this phase of educational work has been that carried out by the Ottawa Public School Board in conjunction with the Museum. On the initiative of the Assistant Curator, arrangements for the work were made in 1937-38 with the Chief Inspector of Public Schools more or less as an experiment, but so successful have been the results that the weekly visits to the Museum by classes from the Public Schools are now a regular feature of the school curriculum. The project is based on the principles that: (a) the museum is an extension of the classroom in that it conserves and places on exhibition materials that a school cannot obtain; (b) it clarifies for the child mind ideas previously obtained in the classroom; (c) the museum maintains a quantity of loan material, e.g., specimens, films, slides, etc., that may be used as teaching aids.

Exhibits large enough to be seen by the whole class are selected. The subjects chosen for the 6-week cycles were: Deep Water Waders, the Buffalo, the Musk-ox, Dinosaurs, and Long-winged Swimmers. The pupils, prepared in the classroom for the lesson, divide into two groups of from 40 to 60. One group, in the lecture hall, sees a film, or slides, or both, together with specimens relative to the lesson. Discussion of the subject is carried on, led by a teacher or one of the pupils. The second group, in the exhibition hall, under the direction of a school instructor in natural science, studies the exhibit. The pupils' attention is directed to its outstanding or characteristic features, and they are asked to draw their own conclusions. Frequently a lesson consists of questions from the pupils and answers by the teacher. The two groups then exchange places, the whole lesson occupying approximately one hour. The teachers receive in advance from the Museum staff any help they may require in preparing the subjects to be taught.

LECTURE HALL

There were 115 reservations of the lecture hall by scientific or educational organizations, at whose meetings there was a total attendance of 22,350 persons. Lantern slides and motion pictures were shown on most occasions.

LECTURES AND MOTION PICTURE PROGRAMS

Two series of lectures on mining, agriculture, geology, botany, industry, travel, and transportation were given under the auspices of the National Museum. They were planned and superintended by a Lecture Committee consisting of M. E. Wilson (Chairman), C. L. Patch, M. F. Goudge, and Miss M. Godwin (Secretary). The lectures were given on Saturdays at 9.45 a.m. and 11.00 a.m. for children and on Wednesday evenings for adults. For the first time in the history of the National Museum lectures the Saturday morning lecture program on February 25 was presented by members of the regular junior audience. The subject, Motion Pictures as an Aid to School Studies, was presented in a highly creditable manner.

For loans of films and slides used to illustrate the lectures, the Museum wishes to express its gratitude to: Mr. Norman Somerville, K.C., Toronto; Mr. D. de Waal Meyer, Accredited Representative for the Union of South Africa, Ottawa; Mr. Bradford Washburn, Harvard University, Cambridge, Mass.; National Geographical Society, Washington, D.C.; National Emergency Council, Washington, D.C.; Ontario Agricultural College, Guelph; Cunard White Star Line, Montreal; Canadian Pacific Railway Company, Montreal; National Parks Bureau, Ottawa; Associated Screen News, Limited, Montreal; and the Geological Survey of Canada, Ottawa.

The assistance of the Canadian Boy Scouts Association (Ottawa district) in acting as ushers in the lecture hall during the children's lectures is greatly appreciated by the committee.

Particular acknowledgment is made of the co-operation of the local newspapers in generously providing space for reports and other news of the various lectures.

Following is a list of the lectures:

- Gold Mining in Canada, by John McLeish, B.A., F.S.S., Director, Mines and Geology Branch, Department of Mines and Resources, Ottawa.
- Rivers, by Major G. M. Thomson, Director of Research, Gypsum, Lime, and Alabastine, Canada, Limited, Paris, Ontario.
- Honey Makers, by C. B. Gooderham, B.S.A., Dominion Apiarist, Central Experimental Farm, Ottawa.
- Western Europe Through a Camera's Lens, by J. F. Booth, M.Sc., Ph.D., Associate Director, Marketing Service, Economics, Department of Agriculture, Ottawa.
- South Africa, Motion Pictures. Shown through the courtesy of D. de Waal Meyer, Accredited Representative for the Union of South Africa, Ottawa.
- One Hundred Feet from Heaven (Bolivia), by Madge MacBeth, Ottawa.
- England, Motion Pictures.
- Scotland and the Glasgow Fair, by F. C. Nunnick, B.S.A., Director, Publicity and Extension Division, Department of Agriculture, Ottawa.
- Yukon Territory in Summer, by Hugh S. Bostock, M.Sc., Ph.D., Geological Survey of Canada, Department of Mines and Resources, Ottawa.
- Here and There in South America, by Alice E. Wilson, B.A., Ph.D., F.R.S.C., Geological Survey of Canada, Department of Mines and Resources, Ottawa.

The Trans-Canada Airway, by J. A. Wilson, Controller of Civil Aviation, Department of Transport, Ottawa.

Making Motion Pictures, by B. E. Norrish, Managing Director, Associated Screen News, Limited, Montreal.

Wild Flowers, by Reverend F. E. Banim, O.M.I., S.T.L., M.A., Dean of the Faculty of Arts, St. Patrick's College, Ottawa.

The total attendance at twenty-six lectures given to children was 11,675, and at fourteen lectures given to adults was 8,285.

In addition to the lecture series described above, nine showings were made of educational motion pictures to junior and senior school pupils, at which there was a total attendance of 7,700.

MOTION PICTURES

Motion picture films, when not being used for educational activities at the National Museum, are lent to museums, scientific societies, educational institutions, and other related organizations throughout Canada. There has been a considerable increase in the number of requests, and the films lent during the year were projected before 151,219 people.

LANTERN SLIDES

Lantern slide sets, with lecture notes, on such subjects as geology, biology, anthropology, palæontology, and geography, were lent, and were seen by 12,935 persons.

SPECIMENS

Loans of biological and anthropological specimens to museums, scientific societies, and educational institutions totalled 609.

Miss M. Godwin, the Secretary of the Lecture Committee, who is also the Museum official in charge of the loan of picture films and lantern slides, attended the joint conference held by the Children's Museum Section of the American Association of Museums, and the City and State of New York Federation of Women's Clubs in New York city in January, and afterwards visited the Department of Education of the American Museum of Natural History, and the Brooklyn Children's Museum. She also attended the meeting at which papers on child psychology were read before the American Association for the Advancement of Science at Ottawa in June.

ANTHROPOLOGICAL DIVISION

D. Jenness, Chief of the Division, reports:

Field Work

Three members of the staff were in the field during the summer.

D. Jenness attended as the official delegate of Canada the International Congress of Anthropological and Ethnological Sciences in Copenhagen, and before and after this congress visited a number of European museums in search of early Canadian Indian material. No one institution possesses any large quantity, but in Denmark, France, Switzerland, Austria, and,

especially, Germany, various museums contain a few rare old specimens dating from the sixteenth to the middle of the nineteenth centuries. Notes were taken of these specimens, and an effort is being made to obtain two or three pieces by exchange. While in Scandinavia Mr. Jenness visited a number of Outdoor Museums, and on his return to Canada prepared a critical appendix to an MS. report on this subject that had been submitted to the Museums Committee established in Canada a few years ago by the Carnegie Corporation of New York.

C. M. Barbeau spent 4 months in Quebec making, for the Public Archives of Canada, an analytic inventory of the archives of the Seminary of Quebec (the most important of their kind in the country), of the archives of the parish of Quebec, and of part of those of the Quebec Bishopric. During the winter he spent another 3 weeks in Quebec, on behalf of the National Parks Bureau, acquiring material and furniture for the equipment and decoration of the Laurier (Memorial) House at St. Lin, Assomption County. In April 1938 he spent a few days at the National Museum in Washington, and at the American Museum of Natural History in New York, studying the collections.

In July and August W. J. Wintemberg continued the excavation of the site near Waubauskene, Simcoe County, Ontario, which he had commenced in September 1937. This year he uncovered enough evidence to settle beyond reasonable doubt that the spot marks the location of the Jesuit Mission St. Ignace II. Between February and April, 1648, the Huron converts of the early French missionaries had abandoned an older village, St. Ignace I (which was probably located in Medonte Township), because it was continuously exposed to attacks from the Iroquois Indians. We are told in the Jesuit Relation of 1649 that they erected a new village about 2 leagues from Fort Ste. Marie, the headquarters of the Jesuit mission in Ontario, on a spot which "was surrounded with a deep ditch wherewith nature had strongly fortified this place on three sides, there remaining only a little space which was weaker than the others." On this fourth side, with the aid of French workmen, they set up a line of palisades. The Hurons had established themselves in this new home only a few months, however, when a thousand Iroquois warriors, armed with guns obtained from the Dutch, stealthily crept up to the palisade in the early hours of the morning, broke through, and massacred all the inhabitants except a few whom they reserved for torture. Leaving a small garrison, they next attacked the village of St. Louis, 3 miles away, where they captured, among others, Fathers Brebeuf and Lalemant. They dragged the two missionaries back to St. Ignace II and subjected them to such terrible tortures that Brebeuf succumbed within 4 hours. Lalemant, though more delicate, survived 15 hours, and was finally dispatched with a hatchet. The Iroquois then retired, whereupon some Huron converts carried the bodies of the two martyrs to Fort Ste. Marie and buried them there.

Such, in brief, is the story of St. Ignace II. Mr. Wintemberg traced the outline of a palisade extending around a 10-acre plot, and located its gateway. Within, he discovered some Indian pottery, and post-holes for two large rectangular houses, each about 100 feet long and from 30 to 35 feet wide. One had a long, narrow entrance-way or enclosed porch

such as was common in medium-sized Huron dwellings. Deep natural ravines on two sides, and the precipitous bank of Sturgeon River on the third, protected the site, just as the Jesuit Relations record, and a few French trade axes picked up by earlier investigators definitely date it within the period of the missions. The fact that Mr. Wintenberg was unable to find any refuse deposits further strengthens the identification of the site with St. Ignace II, because it indicates that the village could have been inhabited only a few months.

After completing these excavations near Waubashene, Mr. Wintenberg studied a collection of archæological material from Saskatchewan in the Royal Ontario Museum of Archæology and prepared a brief report on it for Dr. C. T. Currelly, the director of that museum. He also studied some Ontario pottery in the same museum and certain types of polished stone implements.

Office Work

D. Jenness, in addition to supervising the activities of the Division, prepared a paper on Prehistoric Culture Waves from Asia to America which he read at the International Congress in Copenhagen. He organized the program given by Section H, American Association for the Advancement of Science, at its summer meeting in Ottawa, and both at that meeting and at the winter meeting in Richmond, Virginia, he presided as chairman. He presided also at the Christmas meeting, in New York, of the American Anthropological Association, which elected him its president for 1939. During the winter months he prepared reports on two collections of Eskimo specimens brought out from the Canadian Arctic, one by Dr. Robert Benthall of Manchester University, England, the other by Dr. J. Kenneth Doull, Carnegie Museum, Pittsburgh; and he continued at intervals the preparation of an extensive report on the Coast Salish Indians of British Columbia. The Museum has now published his monograph on The Sarcee Indians of Alberta as well as a guide leaflet to the Plains Indians in French and English.

In the early part of the year C. M. Barbeau submitted a monograph entitled *Assomption Sash*, which has now gone to press. From the museum's collection of French-Canadian folk-songs he furnished twenty-four to Mme. B  clard d'Harcourt, who published them with piano accompaniment through Pierre Schneider, Paris; and from the same collection he contributed most of the folk-songs for the book *Chansons du Vieux Quebec*, published by the Librairie Beauchemin, Montreal. His folk-lore collections have been considerably augmented during the year by correspondents, particularly by Mr. J. T. Leblanc, Moncton, N.B., and M. Adelard Lambert, Drummondville, Quebec.

Mr. Barbeau is now writing two monographs on Old Canadian Silver, one in French and the other in English; they should be ready for publication in June. At intervals he has supervised the typing, for deposition in the National Gallery and in the Public Archives, of some 150 MS. pages of notes that he has gathered concerning historical painting in eastern Canada. He aided the National Gallery in selecting Quebec material for its exhibition of Canadian Art at the Tate Gallery, London, England; and

he assisted the architect of the National Parks Bureau in drawing up a plan for the restoration of the old habitation of Champlain at Louisburg, Nova Scotia.

W. J. Wintenberg completed his report on the Lawson Village Site, Middlesex County, Ontario; it has now been submitted for publication. He finished the writing of a report on the Sidey-Mackay Prehistoric Village Site, Simcoe County, Ontario, but the specimens he has described in it have yet to be photographed. His report on Eskimo Sites in Newfoundland, completed some years ago, was submitted for publication outside, as recommended by the Department, and has been accepted by the *Journal of American Antiquity*. A paper on the Geographical Distribution of Aboriginal Pottery in Canada, prepared by Mr. Wintenberg, was read at the summer meeting of the American Association for the Advancement of Science; and notes of the specimens he studied in the Royal Ontario Museum of Archæology were typed out and forwarded to the director of that museum.

Exhibition Work

J. D. Leechman, assisted by W. G. Roberts, has made progress in the reorganization of the exhibition halls. The east hall is almost finished, although it will undergo minor changes from time to time.

In the west hall nearly all the present cases have been revised, but the labelling is still incomplete. Mr. Jenness' plans for this hall envisage the ultimate replacement of about half the present cases by new ones that can be built by ordinary carpenters to stand against the walls (thus greatly increasing the available space), and can also be lighted from within, thereby doubling their usefulness and attractiveness.

Miss Frances Loring, the Toronto sculptor, has modelled four more life-sized figures, which will be installed in the exhibition halls during the coming months. Miss Winifred K. Bentley has painted thirteen additional Indian scenes, which have already been placed in the exhibition cases near the specimens they illustrate.

In addition to reorganizing the exhibition halls, Mr. Leechman and Mr. Roberts have cleaned, repaired, and catalogued a large number of new specimens. An air-conditioning plant was installed during the year in one of the main storage rooms near the boiler room, where the high temperature threatened to destroy much valuable material.

There were many calls, as usual, for the loan of anthropological specimens, not merely from the schools of the city, but from outside agencies. One collection went to the Manitoba Fine Arts Committee for circulation in the rural districts of that province; another to Acadia University; and a third to the National Gallery of Canada for display at the Canadian Art Exhibition in London, England.

Publications

The Modern Growth of the Totem Pole on the Northwest Coast. By Marius Barbeau. *Journal of the Washington Academy of Sciences*, Washington, D.C., Sept. 15, 1938.

Ceintures fléchées. By Marius Barbeau. *Trans. Royal Society of Canada*, Third Series, vol. XXXII, 1938.

- Saguenay. By Marius Barbeau. *Canadian Geographical Journal*, June 1938.
 Savez-vous des chansons? By Marius Barbeau. *Vacances*, numéro spécial, of *L'Action nationale*, Montreal, June 1938.
 Nos traditions. By Marius Barbeau. *Revue trimestrielle*, Montreal, Sept. 1938.
 Fils d'or et d'argent. By Marius Barbeau. *Le Canada français*, Quebec, Nov. 1938.
 Jeanne Le Ber, sainte artisane. By Marius Barbeau. *Le Canada français*, Quebec, Feb. 1938.
 Sarcee Indians of Alberta. By D. Jenness. *National Museum of Canada*, Bull. 90.
 Archæology of St. Lawrence Island (Review). By D. Jenness. *American Antiquity*, Oct. 1938.
 Guide Leaflet to the Plains Indians. By D. Jenness. *National Museum of Canada*.
 Early Names of the Ottawa River. By W. J. Wintemberg. *Trans. Royal Society of Canada*, Third Series, vol. XXXII, 1938.

Lectures

- L'Habitant. By Marius Barbeau. "Réveil Rural" series, Canadian Broadcasting Corporation, eastern network, April 12, 1938.
 Les Trois Roses empoisonnées. By Marius Barbeau. Cercle français de Washington, Washington, D.C., April 22, 1938.
 How Totem Poles Originated. By Marius Barbeau. Washington Academy of Sciences, Washington, D.C., April 23, 1938.
 Louis Jobin, Wood Carver. By Marius Barbeau. "Historical personalities" series, Canadian Broadcasting Corporation, April 29, 1938.
 Cornelius Krieghoff. By Marius Barbeau. Luncheon Discussion Club, Y.M.C.A., Ottawa, May 6, 1938.
 Series of Thursday lectures at "Le Caveau," an Ottawa art club, on folk-songs, folk tales, and crafts of French Canada, April and May, 1938.
 Arts et métiers. By Marius Barbeau. "Réveil Rural" series, Canadian Broadcasting Corporation, May 8, 1938.
 Ceintures fléchées. By Marius Barbeau. Royal Society of Canada, Ottawa, May 23, 1938.
 Dirge Songs Among the Northwest Coast Indians—Their Historical Significance. By Marius Barbeau. American Association for the Advancement of Science, Ottawa, July 29, 1938.
 Parlons de Québec. By Marius Barbeau. Kiwanis Club, Quebec, Sept. 20, 1938.
 Fils d'or et d'argent. By Marius Barbeau. "Réveil Rural" series, Canadian Broadcasting Corporation, Nov. 10, 1938.
 Ancient French Canada—Its Influence on Indian Culture. By Marius Barbeau. To the students of St. Lawrence University, Canton, N.Y., visiting Ottawa, Nov. 18, 1938.
 Comme Québec change. By Marius Barbeau. "Le Caveau" Club, Ottawa, Nov. 13, 1938.
 Indian Trade Silver. By Marius Barbeau. Annual meeting of the A.A.A.S., Richmond, Virginia, Dec. 27, 1938.
 Nos curés. By Marius Barbeau. "Réveil Rural" series, Canadian Broadcasting Corporation, eastern network, Dec. 15, 1938.
 L'île aux Coudres. By Marius Barbeau. "Réveil Rural" series, Canadian Broadcasting Corporation, Jan. 12, 1939.
 Histoire et légende—un parallèle. By Marius Barbeau. "Réveil Rural" series, Canadian Broadcasting Corporation, Jan. 28, 1939.
 Nos anciens orfèvres. By Marius Barbeau. "Réveil Rural" series, Canadian Broadcasting Corporation, Feb. 28, 1939.
 Folklore and Legend in French Canada. By Marius Barbeau. Sir George Williams College, Y.M.C.A., Montreal, March 10, 1939.
 L'origine de nos arts manuels. By Marius Barbeau. L'Ecole du Meuble, Montreal, March 15, 1939.
 Qui manufacturait les machines agricoles. By Marius Barbeau. "Réveil Rural" series, Canadian Broadcasting Corporation, March 20, 1939.
 Canadian Handicrafts. By Marius Barbeau. Handicrafts Club, Y.W.C.A., Ottawa, March 24, 1939.

Prehistoric Culture Waves from Asia to America. By D. Jenness. International Congress, Copenhagen, Aug. 1, 1938, and American Association for the Advancement of Science, Dec. 27, 1938.

Eskimo Social Life. By D. Jenness. St. Lawrence University, Canton, N.Y., Nov. 12, 1938.

Indians of Canada. By D. Jenness. R.C.A.F. Station, Rockcliffe, Feb. 6, 1939.

Some Archæological Researches on the South Side of Hudson Strait. By Douglas Leechman. American Association for the Advancement of Science, Ottawa, June 27, 1938.

Accessions

The most valuable accession to the anthropological collections was a soapstone statuette discovered last summer in the bed of Alouette River near Vancouver. About a dozen such statuettes from this region are known, none as well carved as this one; three are in private hands, the remainder in museums in Europe and in the United States. Mr. Claude Johnson, of the Biological Division, made four casts of the museum specimen. One cast was sent to the discoverer; one to the Vancouver City Museum; one to the Royal Ontario Museum of Archæology; and the fourth to the American Museum of Natural History in New York, which recently presented the National Museum of Canada with a fine cast of an Indian head.

FROM THE STAFF

C. M. Barbeau:

Archæological material from Hull County, Quebec.

Douglas Leechman:

Three Plains' Indian models.

One Coast Salish model.

BY PURCHASE

Soapstone statuette from New Westminster, B.C., collected by Mr. J. Montgomery.
Archæological material from Belcher Islands, Hudson Bay, collected by Mr. Robert Cruickshank.

BY EXCHANGE

Archæological material from Grandville, Michigan, U.S.

BY DONATION

American Museum of Natural History:

Plains' Indian bust in plaster.

Dr. R. Bentham:

Archæological material from Ellesmere Island.

H. S. Bostock:

Wood showing use of native tools from Yukon.

Obsidian scraper from Yukon.

A. P. Brooke:

Skeletal material from New Westminster, B.C.

Corp. Dodsworth, R.C.M.P.:

Archæological material from Baffin Island.

Rev. Fr. Dutilly, O.M.I.:

Archæological material from the Eastern Arctic.

Rev. Mr. Flint:

Archæological material from Pond Inlet, Baffin Island.

Harry Ford:

Archæological material from River Clyde, Baffin Island.

Clark M. Garber:

Eskimo pottery bowl from Alaska.

Roy Gibson:

Two Eskimo kayaks.

Miscellaneous Eskimo specimens.

David Gudmundsson:

Perforated bear's teeth from an Indian grave, Manitoba

Trevor Harwood:

Archæological specimens from Pangnirtung, Baffin Island

James Little:

Stone gouge from Prescott County, Ontario.

Mrs. A. Major:

Two Tlinkit Indian horn spoons, collected in 1878.

Mrs. Emma Read Newton:

Musical instruments from Angola, west coast of Africa.

D. A. Nichols:

Archæological material from Baffin Island.

Archæological material from Southampton Island.

Eskimo mandible from Pangnirtung, Baffin Island.

One-eyed Bobby (Eskimo):

Archæological material from Port Burwell, N.W.T.

Dr. T. J. Orford:

Archæological material from Pangnirtung, Baffin Island.

P. M. Pringle:

Skeletal material from Port Maitland, Ontario.

Dr. Duncan C. Scott:

Willow-root fish-net from the Northwest Territories.

Thomas Stewart:

Stone scrapers from Tracadie Harbour, P.E.I.

Campbell Wallbridge:

Archæological material from Madoc, Ontario.

A. L. Washburn:

Copper knife from Victoria Island, N.W.T.

R. T. D. Wickenden:

Archæological material from Dauphin, Manitoba.

BIOLOGICAL DIVISION

R. M. Anderson, Chief of the Division, reports:

Office Work

R. M. Anderson continued work on the systematic collections of mammals stored in the rooms of the Division of Biology in the Motor Building, 238 Sparks Street, and looked after the large mammal skins, skulls, and skeletons, and marine vertebrate and invertebrate material stored in the basement of the Victoria Memorial Museum on McLeod Street. An attempt was made to bring the detailed cataloguing up to date, and 1,131 mammals were entered in the Register of Mammals, given permanent numbers, and completely labelled both as to skins and skulls, bringing the total number of catalogued mammal specimens up to 15,800.

A large amount of correspondence relating to specimens and other biological problems received attention. In connection with field work in British Columbia and Alberta, an opportunity was given to attend the 20th annual meeting of the American Society of Mammalogists and the concurrent 21st annual meeting of the American Society of Ichthyologists and Herpetologists, held at the Museum of Vertebrate Zoology, University of California, Berkeley, July 19-23, 1938. Mr. Anderson replied for Canada when responses were made by sectional delegates from abroad (Canada, France, Denmark, Sweden) and the eastern United States in reply to the address of welcome by the Provost of the University. Later in the program he gave an illustrated paper on "The Present Status of Canadian Big Game Mammals," a 5-minute talk on "The Mammal Collection of the National Museum of Canada," and read a short paper prepared by Clyde L. Patch of the National Museum of Canada on "Northern Records of *Rana cantabrigensis* and *Rana sylvatica* with Some Measurements," at the meeting of the American Society of Ichthyologists, of which he is also a member. He also presented a motion picture film, "Sea Lions of the Pacific," for the National Parks Bureau, the film being of interest both scientifically and economically to both the societies mentioned.

The Western trip also enabled him to make some long-desired studies of Canadian mammal specimens in western museums. A day at the Museum of Natural History, University of Iowa, gave opportunity to re-examine the important Russell collection of mammals from northern Manitoba and Mackenzie District, resulting later in obtaining from the Director, Professor Homer R. Dill, plaster casts of various aspects of the skull of the type specimen of Mackenzie Delta grizzly, *Ursus russelli*, a specimen which is of great importance in studies of the grizzly and brown bear of the Arctic coast and subarctic districts of Canada. Half a day was spent at Colorado State Museum, Denver, examining type and topotypes of a species of caribou described from southwestern Yukon Territory, and obtaining information on certain museum technique. A careful examination was made of a large number of Canadian mammals, mostly Pacific coast forms, in the Museum of Vertebrate Zoology at Berkeley and in the California Academy of Sciences at San Francisco, and notes

were made for the National Museum records. British Columbia specimens of fringe-tailed bat, *Myotis thysanoides*, not at the time listed in published records as occurring in Canada, were examined, and numerous other interesting mammal records made for our files on distribution of species of mammals in Canada. On the return trip he visited the Washington State Museum in Seattle and the Provincial Museum at Victoria, B.C.

Field Work

ALBERTA

R. M. Anderson was detailed to carry on certain investigations for the National Parks Bureau on the conditions and relations of big game and predatory mammals. His work at Waterton Lakes National Park, from August 18 to August 30, was mainly in the Cameron Lake, Cameron Creek, Carthew Mountain, and Akamina Pass regions, and enabled him to make several crossings to the British Columbia side of the Interprovincial Boundary, and get some desired data from the extreme southeastern part of British Columbia. He succeeded in adding one species to the British Columbia list, the rufous-tailed chipmunk, *Eutamias ruficaudus ruficaudus*, a form that is common in parts of Waterton Lakes National Park, the only area from which it has previously been recorded in Canada. He visited Banff National Park from September 1 to September 15, and made studies at Spray Creek, Cascade River, Panther River, Cascade Pass, Fortymile Creek, and the Banff-Jasper Highway to the north side of North Saskatchewan River. At Jasper National Park from September 16 to 29 he went up Sunwapta River Valley to the northern end of Banff National Park, Maligne Valley and Medicine Lake, Portal Creek, Tonquin Valley, Meadow Creek, and the eastern part of the park along Athabaska River, Pocahontas, and Miette, and made other shorter trips. A limited number of species of small mammals, reptiles, and amphibians were collected, arrangements were made to obtain other material for the National Museum, and a large amount of information was obtained from personal observation of the larger mammals in their natural surroundings. Some plants were also collected.

BRITISH COLUMBIA

R. M. Anderson was at Crowsnest, B.C., from August 6 to 18, and worked on both sides of the Interprovincial Boundary in British Columbia and Alberta. A series of small mammals, a number of reptiles and amphibians, and a small collection of key plants were collected, mostly around the level of the Rocky Mountain divide, at an altitude of 4,450 feet. A series of the small brown pocket gopher, *Thomomys fuscus*, was collected, and information was received that the local form had within the past 2 or 3 years extended its range a short distance over the Alberta border along the Canadian Pacific Railway right-of-way.

Hamilton M. Laing, of Comox, B.C., and one assistant, Charles J. Guiguet, of Vancouver, extended their biological explorations some distance farther north of the Rivers Inlet area where they worked during the season

of 1937. They worked from June 10 to July 13 at Hagensborg, 12 miles up Bella Coola River. The next camp was at Stuie, near Tweedsmuir Lodge, elevation 454 feet, from July 15 to August 28, some work being done on Caribou Mountain at altitudes from 4,700 feet to 7,000 feet. They worked into the Rainbow Mountains, Mackenzie Valley, from August 28 to September 15. They collected 371 mammals, 87 birds, 14 reptiles and amphibians, and 98 plants, all from a region that is not well represented zoologically in the collections of the National Museum. Of particular interest are a series of the tawny lemming, *Lemmus helvolicus*, which are so far as known the most southern record of this genus in North America.

ONTARIO

The investigation of the flora of the north shore of Lake Superior, initiated in 1935 by the National Museum of Canada, was continued during the summer of 1938 by a party of three men, Professor R. C. Hosie, Faculty of Forestry, in charge, with H. H. Harrison and Elwyn O. Hughes as assistants.

The base camp was established in the town of Michipicoten River, Algoma District, and as in previous years the purpose of the expedition was to make as complete a collection as possible of the vascular plants, together with observations of their habitats and other ecological relationships. The party was in the field from June 17 to September 16.

Approximately three thousand collections were made, three or more specimens of each collection being taken, representing over six hundred species and varieties. These are now being checked over and catalogued in the Department of Botany, University of Toronto. Upwards of one hundred photographs were taken to illustrate the main physiographic and vegetative features. Notes on the ecology of the area were made and a report embodying the principal characteristics of the vegetation is being prepared.

In general the flora represents to a considerable degree a mingling of two major formations, the area being situated approximately where the line is usually drawn between the northern coniferous forest and the deciduous forest formations. Actually, however, the general aspect of the country is that of the true coniferous forest formation, represented by black and white spruce, balsam fir, tamarack, jack pine, paper birch, and mountain ash. These are the principal trees. South from Michipicoten the forest gradually changes. White pine and red pine enter the composition. Yellow birch and sugar maple also come in, but these species are very rare in the vicinity of Michipicoten and as one travels north from there they disappear entirely. Although much of the country a few miles inland has been burned and is now supporting stands of poplar and paper birch or jack pine (mainly temporary species), the actual shoreline still maintains a true coniferous character, largely as the result of the protection from fire afforded by the prevalence of fogs and perhaps a greater precipitation. In addition, much of the shoreline is extremely rugged, to a considerable extent is inaccessible, and due to its exposure supports poor quality trees. It has thus escaped the fate of the interior in part at least.

Some local collections were made by C. L. Patch, C.E. Johnson, and D. Blakely, for habitat groups, loan collections, and other museum purposes, but no extended expeditions were made, the material being obtained in the vicinity of Ottawa from time to time.

Publications

The Present Status and Distribution of the Big Game Mammals of Canada. By R. M. Anderson. Transactions of the Third North American Wildlife Conference held under the auspices of the American Wildlife Institute. Published by the American Wildlife Institute, Washington, D.C., October 1938, pages 390-406, maps 11.

Mammals of the Province of Quebec. By R. M. Anderson. The Provancher Society of Natural History of Canada (La Société Provancher d'Histoire Naturelle du Canada), Annual Report 1938, 20th anniversary number. Quebec, P.Q. Issued February 28, 1939, pages 50-114, 1 map.

Lectures

The Mammal Collection of the National Museum of Canada. By R. M. Anderson. American Society of Mammalogists, July 20, 1938.

Northern Records of *Rana cantabrigensis* and *Rana sylvatica* with some Measurements. By Clyde L. Patch. Short paper. Read by R. M. Anderson, American Society of Ichthyologists and Herpetologists, 21st annual meeting, Museum of Vertebrate Zoology, University of California, Berkeley, July 20, 1938.

Sea Lions of the Pacific. Motion picture film presented for National Parks Bureau. American Society of Mammalogists. July 21, 1938.

The Present Status of Canadian Big Game Mammals. By R. M. Anderson. Paper (maps and illustrations). American Society of Mammalogists, 20th annual meeting, Museum of Vertebrate Zoology, University of California, Berkeley, July 22, 1938.

Exhibition Work

Clyde L. Patch continued the rearrangement of the biological collections in the exhibition halls. Considerable work was done on the collection of reptiles and amphibians, to which 121 specimens were added during the year, making a total of 4,855 catalogued specimens on March 31, 1939.

With the assistance of Claude E. Johnson, a habitat group of six musk-oxen was arranged and installed. The background and ground accessories were designed to show the physiography and ecological conditions of the Wager Inlet region northwest of Hudson Bay, where the musk-oxen were obtained by A. P. Low, a former deputy minister of the Department of Mines while on the Neptune Expedition in 1904. Several small habitat groups were rearranged, and in some cases better specimens were used for replacement. Some of the mounted specimens are first displayed as "new exhibits" in the lobby of the Museum before being placed in the synoptic collections in the special halls.

During March 1939 a new booth was built in line with the habitat groups of wood bison and musk-oxen.

Claude E. Johnson continued preparing accessories and other scientific art work. The following items are among the most important:

Photo enlargements, coloured, retouched, or altered.....	14
Line drawings for publications, special exhibition labels, etc.....	31
Plaster moulds	7
Plaster casts	10

Collections:

Batrachians (Danford Lake, P.Q.).....	15
Freshwater shells (Danford Lake, P.Q.).....	24
Mammals, bats, and cottontail.....	8
Sawwhet owl (Ottawa)	1

48

Miscellaneous:

1 miniature model constructed to scale for musk-ox habitat group, including an oil sketch background 40 inches by 18 inches. From this an enlarged background painting, 18½ feet by 40 feet, was made in situ at Museum. Collections of some local necessary accessories were made. In collaboration with C. L. Patch, moulds and casts were made of four large rocks, the largest being 7 feet long. Coloured supply of natural northern plants, and worked on plaster-covered wire screen base for ground work and later on numerous finishing details.

582 small mammal skulls were labelled and lettered as per catalogue data and 1,450 departmental bird and mammal collection tags prepared.

24 plants Virgin pine coloured for beaver exhibit. Colour details added to exhibit of pair cinnamon teal. Assistance given to Mr. Raizenne, Entomological Branch, in preparing wax foliages as accessories for insect exhibits.

4 figurines and 1 Indian pipe cast and coloured for Anthropological Division, Museum.

1 press mould taken of relief of Sir William Logan and cast made therefrom for Mr. Malcolm (original plaque on boulder in Museum grounds).

A pair of cinnamon teal, a green-winged teal, and a white-breasted brant goose were added to the exhibition collection.

Three hundred and forty-three mammals, birds, and amphibians were lent to educational institutions for nature study and art work.

D. J. Blakely prepared 184 birds and smaller mammals for the study collections.

J. E. Perron prepared 847 skulls of large and small mammals and skeletons of Canadian otter and mountain beaver, and assisted from time to time on the musk-oxen group.

Clyde L. Patch attended the 33rd annual meeting of the American Association of Museums held in Philadelphia, May 19-21, 1938.

Accessions to Museum

MAMMALS

By Gift:

Dr. R. E. DeLury, Dominion Observatory, Ottawa, Ont.: 1 meadow mouse, *Microtus pennsylvanicus*, 1 red-backed vole, *Clethrionomys gapperi*, from Ottawa.

Douglas Leechman, Ottawa, Ont.: 1 meadow mouse, *Microtus pennsylvanicus*, from Ottawa East, Ont.

John Carroll, Ottawa, Ont.: 1 northern white-tailed deer, *Odocoileus virginianus borealis*, skin and skull, from Renfrew, Ont.

Hoyes Lloyd, Ottawa, Ont.: 2 cottontails, *Sylvilagus floridanus mearnsii*, ad. and juvenile; 1 deer mouse, *Peromyscus leucopus noveboracensis*, from Rockcliffe Park.

- Wallace Vandray, Waltham, P.Q.: 1 star-nosed mole, *Condylura cristata*.
 Archibald W. Smith, Ottawa, Ont.: 1 big brown bat, *Eptesicus fuscus*.
 M. Bannon, Proton Station, Ont.: 1 jumping mouse, *Zapus hudsonius*.
 C. L. Patch, Ottawa, Ont.: 1 vole, *Microtus pennsylvanicus*.
 W. E. Saunders, London, Ont.: 1 long-eared bat, *Myotis keenii septentrionalis*, skin and skull, from Long Point, Lake Erie, Ont.
 Bruce S. Wright, Ottawa, Ont.: 27 skins and 33 skulls of *Condylura cristata*, *Sorex cinereus*, *Myotis lucifugus*, *Tamiasciurus hudsonicus*, *Glaucomys sabrinus*, *Peromyscus* sp., *Clethrionomys gapperi*, *Synaptomys cooperi*, *Zapus hudsonius*, *Mustela cicognanii*, *Microtus pennsylvanicus*, collected at Valcartier Military Camp, P.Q.
 H. M. Laing, Comox, B.C.: 1 coast black-tailed deer, *Odocoileus hemionus columbianus*, adult, from Comox, B.C.
 Frank A. Banfield, Toronto, Ont.: 1 southern red squirrel, *Tamiasciurus hudsonicus loquax*, skin and skull, from King City, York County, Ont.
 National Parks Bureau: Three mounted heads: 1 Rocky Mountain elk, *Cervus canadensis*, adult; 1 moose, *Alces americana*, adult; 1 caribou, *Rangifer* species; from western Alberta. Rocky Mountain sheep, *Ovis canadensis*, skeleton with skin from Maligne Canyon, Jasper National Park, Alberta. Coyote, *Canis latrans*, skin without skull; 1 skin of unborn buffalo calf, tanned, *Bison bison bison*; Jasper National Park, Alberta.
 C. G. MacNay, Ottawa, Ont.: 2 long-eared brown bats, *Myotis keenii septentrionalis*, from Limestone Cave, near Wilsons Lake, Gatineau County, P.Q.
 Dr. I. W. Parnell, Institute of Parasitology, Macdonald College, P.Q.: 1 Canadian otter, *Lutra canadensis canadensis* (carcass, skinned), from Lake Edward, north of Quebec, P.Q.
 Knud H. Lang, Aklavik, N.W.T.: 1 mouse weasel, *Mustela rixosa*, skin and skull from Aklavik, N.W.T.; 1 Alaskan collared lemming, *Dicrostonyx groenlandicus rubricatus*, skin and skull, from Richards Island, off north-east Mackenzie Delta, N.W.T.
 Claude E. Johnson, Ottawa, Ont.: 1 Mearns cottontail, *Sylvilagus floridanus mearnsii*, Ottawa; 3 long-eared brown bat, *Myotis keenii septentrionalis*, 4 little brown bat, *Myotis lucifugus*, from Danford Lake, P.Q.
 Ervin Raketti, Shaunavon, Sask.: 1 least weasel, *Mustela rixosa*, in the flesh, from Shaunavon, Sask.
 George P. Holland, Kamloops, B.C.: 1 pocket gopher, *Thomomys talpoides*, skin and uncleaned skull, from Waterton Lakes National Park, Alberta.
 Professor Homer R. Dill, State University of Iowa, Iowa City, U.S.A.: 1 *Ursus russelli* Merriam, plaster cast of skull, from west side of Mackenzie River Delta, N.W.T.
 Provincial Museum, Victoria, B.C.: 2 Selkirk white-footed mouse, *Peromyscus maniculatus alpinus*, from Mount Revelstoke, B.C., collected by Ian McTaggart Cowan and Kenneth Racey.
 Kenneth Racey, Vancouver, B.C.: 1 brown mountain beaver, *Apladonita rufa*, in the flesh, for skeleton, from near Huntingdon, B.C.

By Museum Expedition:

- A. Shortt and R. Sutton, Dauphin, Man.: 27 mammals.
 H. M. Laing and Charles J. Guiguet, British Columbia: 373 mammals, Bella Coola area, B.C.
 R. M. Anderson, Crowsnest, B.C.: Waterton Lakes National Park, Alberta, Banff National Park, Alberta, and Jasper National Park, Alberta, 56 mammals.

By Purchase:

- Lorenzo Boudreault, Havre St. Pierre, Saguenay County, P.Q.: 1 grey seal skin and skeleton.
 Thomas A. Walker, Stuie, B.C.: 1 Pacific land otter, *Lutra canadensis pacifica*, skin and skeleton.

AMPHIBIANS AND REPTILES

By Gift:

R. M. Anderson, Crowsnest, B.C., Waterton Lakes National Park and Banff, Alta.	18
Eric Druce, Petawawa, Ont.	1
W. E. Godfrey, Cape Breton Island and East Roman Valley, N.S.	9
V. E. Gould, Cape Breton Island and East Roman Valley, N.S.	13
C. J. Guiguet, Stuie, Hagensborg, and Rivers Inlet, B.C.	11
G. P. Holland, Stillwater, B.C.	3
C. E. Johnson, Danford Lake, P.Q.	15
H. M. Laing, Stuie, Hagensborg, and Stillwater, B.C.	7
Miss Lillian LeBlank, Cape Breton Island, N.S.	1
L. S. Russell, Etzikom, Alta.	3
Angus Shortt, Riding Mountain, Man.	1
P. A. Taverner, The Pas, Man.	1
B. S. Wright, Valcartier, P.Q.	38

121

MOLLUSCS:

By Gift:

- D. B. Quale, Nanaimo, B.C.: 6 marine molluscs, topotypes of *Paphia bifurcata*, new species, in liquid, from Ladysmith Harbour, Vancouver Island, B.C.

THE NATIONAL HERBARIUM

During the year A. E. Porsild completed the preliminary work on his report on the botany of the western arctic and subarctic regions of Canada. This work has been in progress for several years and has entailed the naming and classification of about 8,000 specimens, aggregating 40,000 herbarium sheets. One small paper on the flora of Diomed Island, Bering Strait, and a larger one dealing chiefly with the floras of Alaska and Yukon based upon this preliminary work, were completed for publication outside of the Department. Additional library research still remains to be done on the larger report on the Western Arctic Botany.

In addition, several important collections were named during the year and the specimens labelled, mounted, and inserted in the herbarium. The more important of these were: D. D. Cairnes, Yukon, 1912; M. O. Malte, Yukon, 1916; W. E. Cockfield, Yukon, 1919; Frits Johansen, James Bay, 1920; H. S. Bostock, Yukon, 1933; C. H. D. Clarke, Thelon Game Sanctuary, 1936-37; V. C. Wynne-Edwards, Labrador and Baffin Island, 1937.

During November 1938 A. E. Porsild spent three weeks at the Grey Herbarium and the Arnold Arboretum, Harvard University, in library and herbarium researches in connection with his Alaska and Northwest Territories flora.

The rearranging and indexing of the National Herbarium, from alphabetical to systematic order was continued, and the following divisions, families, and genera were thus re-arranged: *Pteridophyta*, *Potamogetonaceae*, *Polygonaceae*, *Caryophyllaceae*, *Saxifragaceae*, *Potentilla*, and *Leguminosae*.

Labelling and mounting of plants for insertion in the herbarium continued, with a total of 5,986 sheets mounted and inserted. The number of sheets in the herbarium on March 31, 1939, has thus been increased to 151,868.

During the year a total of 4,926 plants were received as donations and on account of exchange. The most valuable of these accessions was a set of 1,193 plants collected in the Lake Athabaska district, by Dr. H. M. Raup, Arnold Arboretum, Harvard University.

Increasing use has been made of the herbarium during the past year by Canadian and foreign botanists. Dr. E. Hultén, University of Lund, Sweden, spent about 2 weeks studying Alaskan and Yukon plants. Dr. Gustaf Alm, University of Upsala, Sweden, studied Canadian plants. Dr. Hugh M. Raup and a number of other botanists made frequent visits to the herbarium during the summer meeting of the American Association for the Advancement of Science in June 1938. Numerous inquiries on botanical subjects from Government departments and private institutions have been dealt with, and numerous plants received for naming and report. Valuable collaboration has been received from other botanical institutions and from individual botanists in the revising and naming of critical groups of plants in the National Herbarium. In all 2,262 sheets of plants were thus lent to Canadian and foreign botanical institutions. H. M. Raup, Harvard University, named 742 plants collected by Malte and Watson in Banff National Park, 1925, and 187 plants collected by J. M. Macoun.

Publications

Red Spruce in the Lower Gatineau Valley. By C. Heimbürger and A. E. Porsild. *Can. Field-Naturalist*, vol. 52, May 1938.

Silene Menziesii and Allies in Western Canada. By A. E. Porsild. *Rhodora*, vol. 40, May 1938.

Flora of Little Diomedé Island in Bering Strait. By A. E. Porsild. *Trans. Royal Society of Canada*, Third Ser., sec. 5, vol. 32, 1938.

The Cranberry in Canada. By A. E. Porsild. *Can. Field-Naturalist*, vol. 52, November 1938.

Did the old Norse Build Eiderduck Shelters in Jones Sound? By A. E. Porsild. *Geogr. Tidsskr.*, Copenhagen, vol. 41, December 1938.

Lectures

A Botanical Journey through Alaska. By A. E. Porsild. New England Botanical Club, American Academy of Arts and Sciences, Boston, November 7, 1938.

Reindeer and Eskimo. By A. E. Porsild. Science Association, National Research Council, March 29, 1939.

Accessions

<i>Plants received on account of exchange.....</i>	1,939
A. J. Breitung, McKague, Sask.....	164
Botanical Museum, Copenhagen, Denmark.....	311
Gray Herbarium, Harvard University, Cambridge, Mass.....	200
Kansas State College, Hays, Kansas.....	200
Botanical Museum, Lund, Sweden.....	103
Leningrad, U.S.S.R.	424
Utah State Agricultural College, Logan, Utah.....	26
National Museum, Stockholm, Sweden.....	217
H. Steffen, Königsberg, Germany.....	233
U.S. National Museum, Washington, D.C.....	51

<i>Plants received as donations</i>	273
Dr. C. Heimburger, Dominion Forest Service, Ottawa.....	6
Division of Botany, Experimental Farm.....	7
Mr. John Carroll, Topographical Service, Ottawa.....	4
A. E. Porsild, National Museum.....	256
In addition, the following were received from field expeditions:	
Dr. R. M. Anderson, National Museum, Ottawa.....	68
H. M. Laing, Comox, B.C.....	98
Dr. H. M. Raup, Arnold Arboretum, Jamaica Plain, Mass.....	1,193
Rev. A. Dutilly, Rougemont, P.Q.....	200
Dr. V. C. Wynne-Edwards, Montreal, P.Q.....	1,155
<i>Plants distributed on account of exchange</i>	5,909
Arnold Arboretum, Jamaica Plain, Mass.....	78
A. J. Breitung, McKague, Sask.....	172
Botanical Museum, Copenhagen, Denmark.....	316
Cornell University, Ithaca, N.Y.....	46
Mr. Ira Clokey, South Pasadena, Cal.....	216
Botanical Museum, Prague, Czechoslovakia.....	214
Gray Herbarium, Harvard University, Cambridge, Mass.....	615
Botanical Museum, Helsingfors, Finland.....	140
Hungarian National Museum, Budapest, Hungary.....	274
Kew Gardens, London, England.....	143
Kansas State College, Hays, Kansas.....	161
Botanical Museum, Lund, Sweden.....	387
Leningrad, U.S.S.R.	506
Utah State Agricultural College, Logan, Utah.....	257
University of Montreal, Montreal, P.Q.....	340
McGill University, Montreal, P.Q.....	376
N.Y. Botanical Garden, New York city	172
Oka College, La Trappe, P.Q.....	164
M. P. Porsild, Godhavn, Greenland.....	173
National Museum, Stockholm, Sweden.....	481
H. Steffen, Königsberg, Germany.....	278
U.S. National Museum, Washington, D.C.....	400
<i>Plants borrowed</i>	25
Gray Herbarium, Harvard University, Cambridge, Mass.....	25
<i>Plants loaned</i>	2,262
Cornell University, Ithaca, N.Y.....	339
Experimental Farm, Ottawa.....	497
Botanical Museum, Lund, Sweden.....	611
Ohio State University, Columbus, Ohio.....	46
N.Y. Botanical Garden, New York city.....	1
Utah State Agricultural College, Logan, Utah.....	391
Arnold Arboretum, Jamaica Plain, Mass.....	228
Stanford University, California.....	81
University of Michigan, Ann Arbor, Mich.....	43
Botanical Museum, Harvard University, Cambridge, Mass	2
Botanical Institute, Upsala, Sweden.....	22

ORNITHOLOGICAL DIVISION

P. A. Travener, Chief of the Division, reports:

Field work was a survey of that section of Manitoba in the vicinity of Dauphin and Riding Mountain. The party consisted of Angus Shortt and Richard Sutton, both of Winnipeg, Manitoba.

This completes the north and south ornithological cross-section of the province, begun in 1936 and continued in 1937, linking the work at Churchill, 1930, along the line of the Hudson Bay Railway and western

Manitoba with the southern sections that have already received serious attention from ornithologists.

Two stations were studied. The first in the lowland neighbourhood of Dauphin, June 1 to 25; the second, through the courtesy and with the assistance of the National Parks Bureau, from the shores of Clear Lake in Riding Mountain National Park. Three hundred and sixty-seven specimens and a large number of notes were obtained, giving a satisfactorily representative outline of ornithological conditions in the localities.

The results of these several years investigations in the province are being correlated with all other available information and a report on the same is under preparation.

H. M. Laing and Chas. Guiguet continued their investigations up the ornithologically almost unknown coast of British Columbia. The scene of this season's work was near Hagensborg and Stuie, inland from Bella Coola. Although the principal object of their expedition was the collection and study of mammals, considerable ornithological data were obtained and some interesting specimens secured. The most notable result is the observation that a number of interior forms here make their way towards the coastal region. This is particularly significant in conjunction with the fact that this valley is an ancient route between the interior and the coast, followed by the Indians in their primitive trading journeys, the topographical conditions forming a natural highway from the interior.

A notable accession consists of some one hundred and fifty salted bird skins collected in the delta of Mackenzie River and donated by A. E. Porsild. These are in addition to over a hundred similar specimens from the Northwest Territories previously donated by Mr. Porsild, and make an important addition to our specimen resources for the study of subarctic fauna.

The Division has to thank a good many individual correspondents and friends who have supplied data on current ornithological occurrences in all parts of the country, assisting us greatly in keeping our files up to date. Without this voluntary assistance from a widespread general public much valuable information would be lost.

About 2,000 bibliographical cards have been filed, indexing current ornithological literature up to January 1. A survey was made of all the more important ornithological researches and studies that have been made in Canada, and the data embodied in a map showing the areas concerning which most information is available as well as the areas where future efforts would be productive of new information.

The stations thus indicated graphically are numbered and accompanied by a list indicating where the results of each operation can be referred to. This project was conducted in collaboration with a committee of the American Ornithologists' Union in conjunction with similar treatment of the United States and Central America.

A growing number of inquiries from all classes of observers, amateur and professional, have been received and answered. A number of specimens have been received from various sources for identification. The Chief of the Division has attended a number of meetings of the Wildlife Advisory Board as well as that of the Provincial Game Authorities held in this city in February.

Study material has been lent to the following individuals and institutions:

- Allan Brooks, artist and naturalist, Okanagan Landing, B.C.
 J. A. Munro, Chief Federal Migratory Bird Officer for British Columbia, Okanagan Landing, B.C.
 Royal Ontario Museum of Zoology, Toronto, Ont. (2 lots).
 Cleveland Museum of Natural History, Cleveland, Ohio.
 Museum of Zoology, University of Michigan, Ann Arbor, Mich.
 J. A. Fleming, Honorary Curator of Ornithology in this Museum, Toronto, Ont.
 Dr. Max, M. Peet, Ann Arbor, Mich.
 Laboratory of Ornithology, Cornell University, Ithaca, N.Y. (2 lots).
 Local artists.

Exhibition Halls

Little has been done on the ornithological exhibits beyond some minor replacements and the addition of a few new specimens. Experiments are still being conducted in the lighting of cases to avoid reflections, but nothing serious can be accomplished with these exhibits until a permanent hall becomes available for them.

Accessions

By Gift:

- Angus Shortt, Winnipeg, Man.: broad-winged hawk, *Buteo platypterus*, from Manitoba.
 Earl Godfrey, Wolfville, N.S.: 3 Canada goose skins, *Branta canadensis*, from Nova Scotia.
 Ralph DeLury, Dominion Observatory, Ottawa: common redpoll, in flesh, *Acanthis linaria*.
 E. F. G. White, Ottawa: male green-winged teal, *Nettion carolinense*, in flesh.
 Richard Bernard and R. Choette, Jardin Zoologique, Charlesbourg, P.Q.: 3 hoary redpolls, *Acanthis exilpes hornemanni*.
 Herbert Groh, Central Experimental Farm, Ottawa: Cape May warbler, *Dendroica tigrina*, in flesh.
 Anne and Barbara Potter, Ottawa: Virginia rail, *Rallus limicola*, in flesh.
 Frank Farley, Camrose, Alta.: mourning dove, *Zenaidura macroura*, fragmentary specimen found at Churchill, Man. Also skin of nondescript duck taken from wild flock but judged to hybrid with some domestic strain.
 C. F. Powles, Shawville, P.Q.: incubated egg and embryo in formaline of wood duck, *Aix sponsa*. Taken from chimney.
 R. W. Bray, British Arctic Expedition, London, England: 11 salted bird skins from Southampton Island and Admiralty Inlet Franklin.
 Albert Wilk, Camrose, Alta.: red-winged blackbird, *Agelaius phoeniceus*, bronzed grackle, *Quiscalus quiscula*, and Arctic tern, *Sterna paradisaea*, from Churchill, Man.
 Central Experimental Farm, Ottawa: 30 cowbirds, *Molothrus ater*, red-winged blackbirds, *Agelaius phoeniceus*, and bobolink, *Dolichonyx oryzivorus*, in flesh.
 T. Gourley, Ottawa: red-tailed hawk, *Buteo borealis*, in flesh.
 H. O. Whitman, Moncton, N.B.: ring-necked duck, *Nyroca collaris*, in flesh.
 G. M. Brigham, Ottawa: Wilson's petrel, *Oceanites oceanicus*, in flesh. Picked up dead on Ottawa River, Quebec side on Lake Deschenes, near Ottawa.
 Farley Mowatt, Toronto: white-eyed vireo, *Vireo griseus*, from Toronto, Ont.
 H. A. Wiggans, Ottawa: barred owl, *Strix varia*, in flesh.
 P. Jutros, Ottawa: American rough-legged hawk, *Buteo lagopus*, in flesh.
 J. N. Carnochan, Ottawa: American brant, *Branta bernicla*, in flesh, from Mississippi Lake, Ont.
 E. F. G. White, Ottawa: American merganser, *Mergus merganser*, black duck, *Anas rubripes*, and pied-billed grebe, *Podilymbus podiceps*, in flesh.

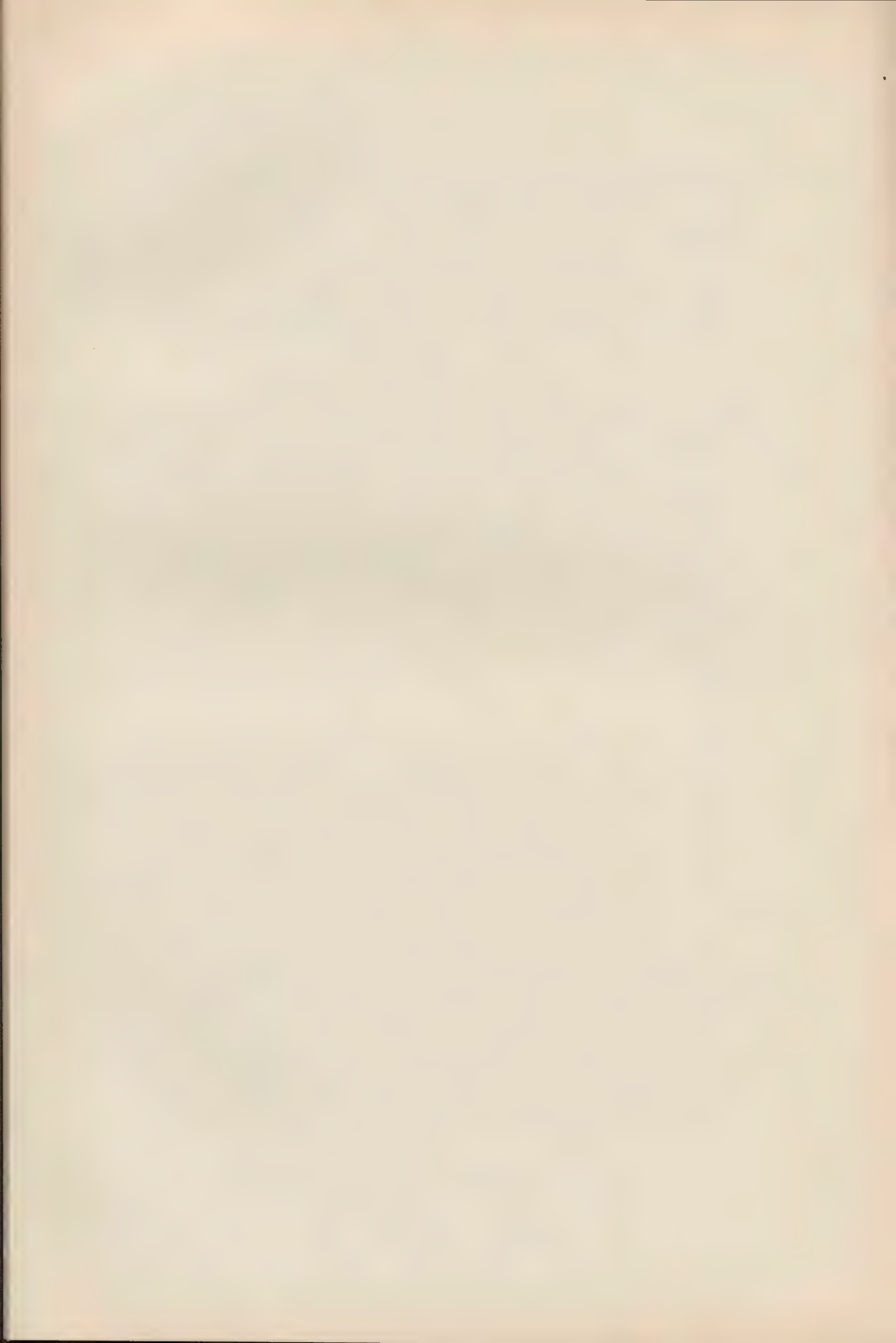
- J. S. Jenkins, R.C.M.P., Prince Edward Island: a pair and three nestling goshawks, *Astur atricapillus*, red-tailed hawk and nestling, *Buteo borealis*, and American sparrow hawk, *Falco sparverius*, in flesh.
- James Moffitt, San Francisco, Calif.: 3 Canada geese, *Branta canadensis*, fresh salted skins.
- Richard Finnie, Carp, Ont.: black-capped chickadee, *Penthestes atricapillus*, in flesh.
- H. H. Bailey, Coral Gables, Fla.: bronzed grackle, *Quiscalus quiscula*, from Churchill, Man.
- T. L. Thacker, Little Mountain, Hope, B.C.: spotted owl, *Strix occidentalis*.
- H. S. Hammond, Central Experimental Farm, Ottawa: pine grosbeak, *Pinicola enucleator*, in flesh.

By Muscum Expedition:

- Angus Shortt and R. Sutton, Dauphin and Riding Mountain: 338 bird skins.
- H. M. Laing and Chas. Guiguet, coast of British Columbia, Hagensborg, and Stuie, inland from Bella Coola: 157 bird skins.
- R. M. Anderson, Waterton Lake Park, Alta.: 3 bird skins.

By Purchase:

- Cyril Mercier, Whale Head, Saguenay County, P.Q.: killdeer plover from same neighbourhood.
- Thomas Monger, Whale Head, Saguenay County, P.Q.: fulmar from same neighbourhood.
- Arthur Nelles, Ottawa: 20 bird skins from the north shore of Gulf of St. Lawrence.
- R. Sutton, Winnipeg, Man.: barred owl from Manitoba.



OTTAWA
J. O. PATENAUDE, I.S.O.
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1939